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Authorised and notified according  
to Article 29 of the Regulation (EU)  
No 305/2011 of the European  
Parliament and of the Council of 9  
March 2011

MEMBER OF EOTA



## European Technical Assessment ETA-11/0501 of 12/09/2016

### I General Part

**Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S**

**Trade name of the construction product:**

Alfix Banemembran Watertight covering kit

**Product family to which the above construction product belongs:**

Watertight covering kit for wet room floors and walls based on flexible sheets

**Manufacturer:**

Alfix A/S  
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DK-6000 Kolding  
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Internet [www.alfix.dk](http://www.alfix.dk)

**Manufacturing plant:**

Alfix A/S  
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DK-6000 Kolding

**This European Technical Assessment contains:**

8 pages including 1 annex which form an integral part of the document

**This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:**

Guideline for European Technical Approval ETAG No 022 Watertight covering kits for wet room floors and/or walls, Part 2: Kits based on flexible sheets, Edition November 2010, used as European Assessment Document (EAD).

**This version replaces:**

The ETA with the same number issued on 2016-08-10

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## II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

### 1 Technical description of product and intended use

#### Technical description of the product

##### General

Alfix Banemembran is a flexible sheet Banemembran membrane kit which serves as a watertight covering for wet room floors and walls beneath a wearing surface.

The kit consists of the following components:

##### Primer

Alfix VådramsPrimer, which is a polymer dispersion primer with a “tell-tale” colour additive, for use on moisture sensitive substrates. The primer is intended to have a significant additional function in limiting the water vapour permeability of the kit

##### Membrane

Alfix Banemembran is a 3-ply waterproof membrane consisting of two outer layers of polypropylene non-wovens and an inner layer of polyethylene. The thickness of the membrane is 0.67 mm and the weight is 295 g/m<sup>2</sup>.

##### Reinforcement

The reinforcement Alfix SealStrip, Alfix VT-Rørmanchet, Alfix VT-Hjørner and Alfix VT-Tætningsbånd, are used in connection between the floor and the wall, in corners and around penetrations. For floor gullies the Alfix Afløbsmanchet is used. The reinforcement is not intended to cover the entire floor and wall covering, but is used over joints and in corners and around pipe penetrations and floor gullies

##### Adhesives

Adhesives covered by this ETA is: Alfix LetFix Universal, Alfix LetFix, Alfix CombiFix, Alfix ProFix, Alfix CombiQuickFix

The kit is constructed as follows:

- a layer of minimum 0.10 litres/m<sup>2</sup> (120 g/m<sup>2</sup> Alfix VådramsPrimer (depending on substrate)
- reinforcement of in- and out going corners in walls, over joints or cracks in the substrate, around pipe penetrations, floor gullies and along the connection between floor and wall with reinforcement Alfix Seal Strip, Alfix VT-Rørmanchet, Alfix VT- Hjørner, Alfix VT-Tætningsbånd and Alfix Afløbsmanchet.

- Alfix Banemembran adhered to the substrate with approx. 0.5 kg/m<sup>2</sup> Alfix 1K or 2K liquid membrane
- a layer of ceramic tiles adhered to the kit with cement based tile adhesive (Alfix LetFix Universal, Alfix LetFix, Alfix CombiFix, Alfix ProFix, Alfix CombiQuickFix).

### 2 Specification of the intended use in accordance with the applicable EAD

The intended use of the covering kit is:

1. watertight covering for use beneath a wearing surface, normally in the form of tiles, on substrates of wood based panels, gypsum boards, fibre cement boards, cement bonded boards, watertight boards made from a polystyrene core with a cement based glass fibre reinforced covering and concrete, i.e. moisture sensitive substrates, which are flexible and with jointing and susceptible to cracking

The kit can be used with the following types of floor gullies:

Circular and rectangular gullies made from stainless steel or plastic type PE, with flange for adhesion of the membrane or with clamping ring or with collar

2. Indoor applications, where the liquid applied kit is not exposed to temperatures (i.e. temperature of structure) below 5 °C and above 40 °C, in the following uses:

- Floor and wall surfaces with only occasional direct exposure to water, e.g. at a good distance from shower or bathtub.
- Floors and walls in shower areas or around bathtubs used for a few showers daily, e.g. in ordinary dwellings, multi-family houses and hotels
- Floor and wall surfaces with exposure to water more frequent or of longer duration than normally anticipated in dwellings, e.g. public wet rooms, schools and sport facilities.

The provisions made in this European Technical Assessment are based on an assumed intended working life of the kit of 25 years.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### 3 Performance of the product and references to the methods used for its assessment

Characteristic	Assessment of characteristic
<b>2.2 Safety in case of fire (BWR2)</b>	
Reaction to fire	<b>Euroclass F</b>
<b>2.3 Hygiene, health and the environment (BWR3)</b>	
Dangerous substances	The product does not contain/release dangerous substances specified in TR 034, dated March 2012 0*)
Vapour permeability	The $s_d$ value of the membrane at RH 100 → 75 % is 127 m  The $s_d$ value of the membrane at RH 93 → 50 % is 75 m  The values are for the flexible sheet alone, and the other components of the kit are not considered to have an adverse effect on these values.
Moisture resistance	
Water tightness	<b>Watertight</b> according to EN 1928 method B
Crack bridging ability	<b>Assessment category 2:</b> Crack width 0,75 mm
Bond strength	Alfix Banemembran with Alfix VådrumsPrimer and the following tile adhesives; Alfix LetFix Universal, Alfix CombiFix, Alfix CombiQuickFix, Alfix ProFix on a concrete substrate all comply with <b>Assessment category 2:</b> Bond strength > 0.3 MPa  Alfix VådrumsPrimer with the following tile adhesives; Alfix LetFix Universal, Alfix LetFix, Alfix CombiFix, Alfix ProFix on substrates**) of calcium silicate boards, gypsum boards, fibre cement boards, cement based boards and watertight boards made from a polystyrene core with a cement based glass fibre reinforced covering comply with <b>Assessment category 2:</b> Bond strength > 0.3 MPa
Scratching resistance	No performance determined
Joint bridging ability	Alfix Banemembran and 0.5 kg/m <sup>2</sup> Alfix 2K membrane <b>Assesment category 2:</b> Watertight
Water tightness around penetrations	Alfix VådrumsPrimer, Alfix Banemembran and 0.5 kg/m <sup>2</sup> Alfix 2K membrane and Alfix reinforcement (see II.1)***) comply with <b>Assesment category 2:</b> Watertight

Characteristic	Assessment of characteristic
Joint strength	The declared values are:  <b>Joint transverse to MD: 377 N</b> <b>Joint transverse to CMD: 254 N</b>
Flexibility	<b>No cracking or other surface deterioration visible</b>
<b>2.7 Related aspects of durability and serviceability</b>	
Dimensional stability	The declared values are: <b>Longitudinal direction (MD): <math>\bar{\alpha}_{AL} = -0.34 \%</math></b> <b>Transverse direction (CMD): <math>\bar{\alpha}_{AL} = -0.33 \%</math></b>
Resistance to temperature	<b>Pass.</b> The tensile strength and the strain at maximum force of a sample of Alfix Banemembran were determined before and after heat exposure. The deviation before and after ageing was considerably lower than 20% and therefore no further investigations are required to assess that the resistance to temperature.
Resistance to water	Alfix Banemembran with the following tile adhesives; Alfix LetFix, on a concrete substrate all comply with <b>Assessment category 2: Bond strength &gt; 0.3 MPa</b>  Alfix Banemembran with Alfix VådrumsPrimer and the following tile adhesives; Alfix LetFix Universal, Alfix CombiFix, Alfix CombiQuickFix, Alfix ProFix on a concrete substrate all comply with <b>Assessment category 2: Bond strength &gt; 0.3 MPa</b>
Resistance to alkalinity	<b>Pass.</b> The tensile strength and the strain at maximum force of a sample of Alfix Banemembran were determined before and after alkaline exposure. The deviation before and after ageing was considerably lower than 20% and therefore no further investigations are required to assess that the resistance to alkalinity. <b>Assessment Category 2: 50 °C for 16 weeks</b>
Repairability	No performance assessed
Thickness	The thickness of the Alfix Banemembran is determined to be 0.67 mm
Applicability	Applicable
<b>2.8 Sustainable use of natural resources (BWR7)</b>	No performance determined

\*) In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply..

\*\*) The assessment of the fitness for use of the kit on the generic description of the boards is based on test on the following specified substrates in addition to concrete according to EN 1323; Ivarit Hydropanel, Ivarit UniCo, Ivarit UniCo Flex konveks, Internit VR, Aquapanel indoor, Powepanel H2O, Lux Element, Jackoboard, Wedi Building board and Glasroc GHIE Hydro Wet room board

\*\*\*) In accordance with the provisions of ETAG 022 part 2 – Annex A, the kit has been tested with three types of floor gullies all circular; one made from stainless steel with a flange for floors with a membrane and two in PP plastic, where one is with a clamping ring type KL/150: In addition the test was made with with three stainless steel gullies, from Unidrain, JOFA and Blücher respectively. All three floor gullies are installed in the connection between the floor and the wall, i.e. in the floor in close proximity to the wall.

### **Aspects related to the performance of the product**

The European Technical Assessment is issued for the product on the basis of agreed data/information, deposited with ETA-Danmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to ETA-Danmark before the changes are introduced. ETA-Danmark will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

The performance of the watertight membrane kit results from the characteristic values and categories.

The supplementing statements of the manufacturer stated in the MTD for design and application of the watertight system for creating a watertight covering under wearing surface for floors and walls in indoor wet areas shall be considered

The performance of the watertight membrane can be assumed only, if the following aspects are considered:

- only those components which are specified components of the kit can be used,
- the appropriate tools shall be used and adjuvant, precautions shall be taken,
- inspecting the substrate surface for cleanliness and correct treatment,
- inspection in the process of establishing the kit and of the finished watertight membrane and documentation of the results.

The information as to the handling of waste products shall be observed.

It is the manufacturer's responsibility to make sure that all those who utilize the kit will be appropriately informed about the specific conditions according to this ETA and the not confidential parts of the MTD deposited to this ETA

#### **4 Attestation and verification of constancy of performance (AVCP)**

##### **4.1 AVCP system**

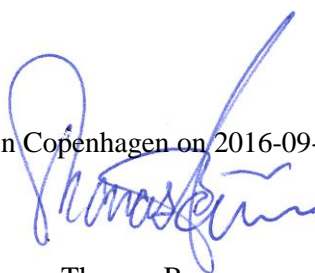
According to the decision 2003/655/EC of the European Commission as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 2+.

There is no declared fire performance, and hence the Decision 2003/655/EC of the European Commission with regard to reaction to fire is not relevant.

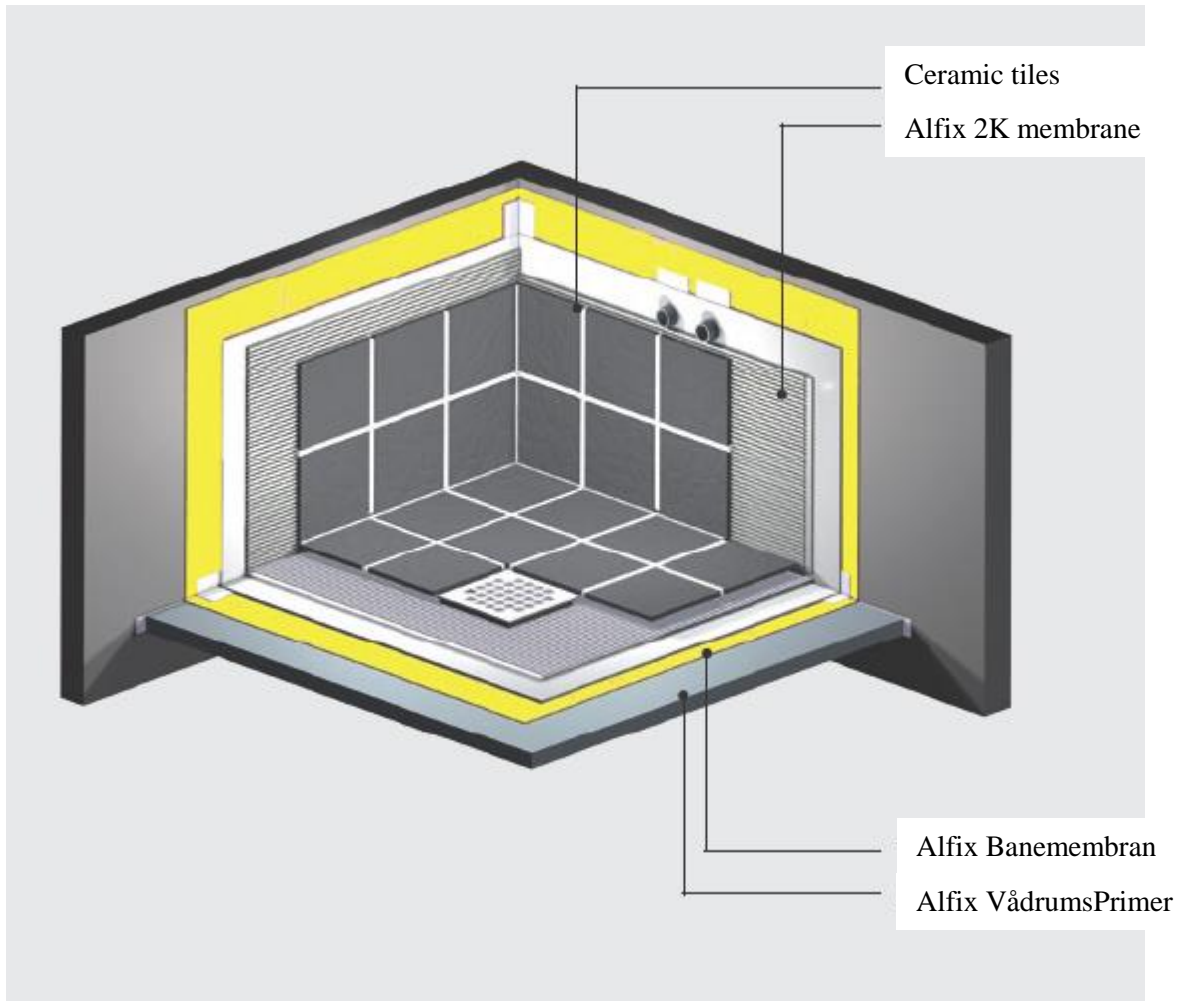
#### **5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD**

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark

Issued in Copenhagen on 2016-09-12 by



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Managing Director, ETA-Danmark



Alfix Banemembran watertight covering kit

Principle build-up of the kit

Annex 1

of European Technical Assessment  
ETA-11/0501